

s/n: 09/672,159

date: 9-2-04

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------|
| 70   | ("4111524"   "4153330"   "4198117"   "4274706"   "4279464"   "4299488"   "4343532"   "4387955"   "4479697"   "4522462"   "4583820"   "4622662"   "4626069"   "4634215"   "4643519"   "4652080"   "4671607"   "4703472"   "4708425"   "4726645"   "4740951"   "4741588"   "4744618"   "4746186"   "4748614"   "4749247"   "4752108"   "4760569"   "4763969"   "4773063"   "4786133"   "4819224"   "4834485"   "4836634"   "4857726"   "4923271"   "4926412"   "4930855"   "4934784"   "4979821"   "5026131"   "5107359"   "5170451"   "5228103"   "5278687"   "5355237"   "5363220"   "5440416"   "5442472"   "5450510"   "5457573"   "5500910"   "5513289"   "5526155"   "5541774"   "5555334"   "5583683"   "5606434"   "5657406"   "5703722"   "5742416"   "5745270"   "5745271"   "5745612"   "5748350"   "5748815") | USPAT                    | 9/2/04 14:3  |
| 34   | 4819224.URPN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | USPAT                    | 9/2/04 14:3  |
| 2    | 6271970.URPN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | USPAT                    | 9/2/04 14:4  |
| 16   | ("4815807"   "4995709"   "5394493"   "5400429"   "5446815"   "5815624"   "6010251"   "6012852"   "6019522"   "6142678"   "6168319"   "6263133"   "6304694"   "6328482"   "6393179"   "6404955")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | USPAT                    | 9/2/04 14:4  |
| 33   | Helkey-Roger\$9.in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | USPAT; US-PGPUB; IBM_TDB | 9/2/04 14:5  |
| 3    | 93 and (index with refract\$5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | USPAT; US-PGPUB; IBM_TDB | 9/2/04 15:3  |
| 54   | ("2982859"   "3649105"   "3990780"   "4303302"   "4365863"   "4378144"   "4421381"   "4598585"   "4626066"   "4654663"   "4657339"   "4677290"   "4696062"   "4855017"   "4866699"   "4922756"   "5016072"   "5030004"   "5083857"   "5097354"   "5172262"   "5203208"   "5226321"   "5271075"   "5488862"   "5524153"   "5536988"   "5541756"   "5555558"   "5627669"   "5629790"   "5670881"   "5673139"   "5796880"   "5878177"   "5920417"   "5943157"   "5943454"   "5960132"   "5960133"   "6000280"   "6031656"   "6075239"   "6097858"   "6097859"   "6097860"   "6101299"   "6253001"   "6278812")                                                                                                                                                                                                             | USPAT                    | 9/2/04 14:4  |
| 614  | lens same ((anti\$reflect\$5 or AR) with coat\$5) same substrate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | USPAT; US-PGPUB; IBM_TDB | 9/2/04 15:2  |
| 408  | 96 and (index with refract\$5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | USPAT; US-PGPUB; IBM_TDB | 9/2/04 15:3  |
| 180  | 97 and (359/\$.ccls. or 385/\$.ccls. or 257/\$.ccls.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | USPAT; US-PGPUB; IBM_TDB | 9/2/04 15:3  |
| 75   | 98 and fiber                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | USPAT; US-PGPUB; IBM_TDB | 9/2/04 15:3  |
| 60   | ("3492484"   "3649105"   "4179183"   "4421381"   "4479697"   "4574191"   "4598585"   "4654663"   "4696062"   "4696545"   "4701011"   "4745357"   "4815806"   "4834484"   "4834485"   "4838637"   "4859012"   "4875756"   "4886331"   "4922756"   "4923269"   "4941724"   "4978193"   "4981335"   "4993796"   "5016072"   "5044713"   "5077622"   "5077815"   "5083857"   "5097354"   "5172262"   "5203208"   "5226321"   "5440654"   "5450245"   "5488862"   "5524153"   "5536988"   "5627669"   "5629790"   "RE35575"   "5647033"   "5673139"   "5689360"   "5822125"   "5920417"   "5963682"   "6000280"   "6002818"   "6046859"   "6097858"   "6097859"   "6097860"   "6101299"   "6208469"   "6222679"   "6253001"   "6328482")                                                                                     | USPAT                    | 9/2/04 14:5  |
| 1    | (6328482).PN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | USPAT; US-PGPUB; IBM_TDB | 1/15/03 13:5 |
| 333  | fiber near3 socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:0 |
| 328  | refract\$4 near3 (microlens or micro\$2lens or (micro adj lens))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:2 |
| 1266 | anodic adj bond\$3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:1 |
| 933  | wafer adj stack\$4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:1 |
| 16   | (microlens or micro\$2lens or (micro adj lens)) near3 sag                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:2 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |              |
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| 4 ("5,870,224") or ("4,666,248") or ("5,066,099") or ("4,721,361")).PN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:2 |
| 20 (microlens or micro\$2lens or (micro adj lens)) near3 hybrid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | USPAT; US-PGPUB; IBM_TDB | 1/15/03 14:0 |
| 1 single adj mode adj fiber adj unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:3 |
| 32367 single near2 mode ear2 fiber near2 unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:3 |
| 36 (single near2 mode ear2 fiber near2 unit) and (fiber near3 socket)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:5 |
| 4 4076377.URPN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | USPAT                    | 1/14/03 14:3 |
| 12 5495541.URPN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | USPAT                    | 1/14/03 14:3 |
| ("3968564"   "4292512"   "4466696"   "4897711"   "4934784"   "4945400"   "5181224"   "5195150"   "5247597"   "5259054"   "5337398"   "5345529"   "5346583"   "5434939"   "5471552"   "5501893"   "5742720"   "6023546").PN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | USPAT                    | 9/2/04 10:1  |
| 9 5346583.URPN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | USPAT                    | 1/14/03 14:4 |
| 10 5853960.URPN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | USPAT                    | 1/14/03 14:4 |
| ("4749662"   "5216414"   "5266501"   "5404005"   "5554446"   "5561319"   "5593913"   "5595930"   "5604362"   "5739562"   "5747790"   "5853960"   "5859450"   "5965452").PN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | USPAT                    | 1/14/03 14:4 |
| ("4349410"   "4354898"   "4433898"   "4464458"   "4613398"   "4653847"   "4875750"   "4923564"   "5073003"   "5145793"   "5155778"   "5247597"   "5265177"   "5270258"   "5343546"   "5346583"   "5452118"   "5600741"   "5696862"   "5761350"   "5764832"   "5853960"   "5872880"   "5883988"   "5911022").PN.                                                                                                                                                                                                                                                                                                                                                                                                                                     | USPAT                    | 1/14/03 14:4 |
| 1 6328482.URPN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | USPAT                    | 1/14/03 14:5 |
| ("3492484"   "3649105"   "4179183"   "4421381"   "4479697"   "4574191"   "4598585"   "4654663"   "4696062"   "4696545"   "4701011"   "4745357"   "4815806"   "4834484"   "4834485"   "4838637"   "4859012"   "4875756"   "4886331"   "4922756"   "4923269"   "4941724"   "4978193"   "4981335"   "4993796"   "5016072"   "5044713"   "5077622"   "5077815"   "5083857"   "5097354"   "5172262"   "5203208"   "5226321"   "5440654"   "5450245"   "5488862"   "5524153"   "5536988"   "5627669"   "5629790"   "RE35575"   "5647033"   "5673139"   "5689360"   "5822125"   "5920417"   "5963682"   "6000280"   "6002818"   "6046859"   "6097858"   "6097859"   "6097860"   "6101299"   "6208469"   "6222679"   "6253001"   "6328482"   "6330102").PN. | USPAT                    | 1/14/03 14:5 |
| 18560 fiber near3 optic\$3 near3 (coupl\$4 or pigtail or (pig adj tail) or pig\$2tail)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:5 |
| 5860 optic\$3 near3 (cement or adhesive or glue or fasten\$4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:2 |
| (optic\$3 near3 (cement or adhesive or glue or fasten\$4)) and (refract\$4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |              |
| 26 near3 (microlens or micro\$2lens or (micro adj lens))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | USPAT; US-PGPUB; IBM_TDB | 1/14/03 14:5 |
| optic\$3 near3 (cement or adhesive or glue or fasten\$4) and ((fused adj                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |              |
| 33 silica) same silicon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:2 |
| (single near2 mode ear2 fiber near2 unit) and (optic\$3 near3 (cement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |              |
| 785 or adhesive or glue or fasten\$4))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:2 |
| ((single near2 mode ear2 fiber near2 unit) and (optic\$3 near3 (cement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |              |
| or adhesive or glue or fasten\$4))) and (refract\$4 near3 (microlens or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |              |
| 7 micro\$2lens or (micro adj lens)))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:2 |
| 269 collimat\$4 near3 (microlens or micro\$2lens or (micro adj lens))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:2 |
| 2000 (fused adj silica) same silicon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:2 |
| (collimat\$4 near3 (microlens or micro\$2lens or (micro adj lens))) and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |              |
| 2 ((fused adj silica) same silicon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:2 |
| 337 (359/642).CCLS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:5 |
| (collimat\$4 near3 (microlens or micro\$2lens or (micro adj lens))) and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |              |
| 0 ((359/642).CCLS.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:5 |
| 68202 (359).CLAS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | USPAT; US-PGPUB; IBM_TDB | 1/14/03 15:5 |

|                                                                                                                                                                                                                                                                                                                                                                                                        |                          |              |
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| ((359/\$).CCLS.) and (collimat\$4 near3 (microlens or micro\$2lens or 86 (micro adj lens)))                                                                                                                                                                                                                                                                                                            | USPAT; US-PGPUB; IBM_TDB | 1/14/03 16:1 |
| 68202 (385/33, 34, 93).CCLS. or (359).CLAS. ((385/33, 34, "93" or 359/\$).CCLS.) and (collimat\$4 near3 (microlens or 86 micro\$2lens or (micro adj lens)))                                                                                                                                                                                                                                            | USPAT; US-PGPUB; IBM_TDB | 1/14/03 16:1 |
| (((385/33, 34, "93" or 359/\$).CCLS.) and (collimat\$4 near3 (microlens 8 or micro\$2lens or (micro adj lens)))) and grin                                                                                                                                                                                                                                                                              | USPAT; US-PGPUB; IBM_TDB | 9/2/04 10:2  |
| 10 multilayer near3 fiber near3 coupler                                                                                                                                                                                                                                                                                                                                                                | USPAT; US-PGPUB; IBM_TDB | 1/14/03 16:2 |
| USPAT; US-PGPUB; IBM_TDB                                                                                                                                                                                                                                                                                                                                                                               | 1/14/03 16:2             |              |
| 694 (multilayer or multi\$2layer or (multi adj layer)) near3 (coupl\$3 or socket) 14 multilayer near3 fiber near3 (coupl\$3 or socket) (multilayer or multi\$2layer or (multi adj layer)) near3 fiber near3 22 (coupl\$3 or socket) ("4673270"   "4798436"   "4976512"   "5011251"   "5044716"   "5129020"   "5179603"   "5268979"   "5295210"   "5295211"   "5339372" 13   "5412745"   "5754720").PN. | USPAT; US-PGPUB; IBM_TDB | 1/14/03 16:2 |
| 23336 fiber near3 (coupl\$3 or socket) (fiber near3 (coupl\$3 or socket)) and (fiber near3 optic\$3 near3 17094 (coupl\$4 or pigtail or (pig adj tail) or pig\$2tail)) ((fiber near3 (coupl\$3 or socket)) and (fiber near3 optic\$3 near3 (coupl\$4 or pigtail or (pig adj tail) or pig\$2tail))) and (refract\$4 near3 54 (microlens or micro\$2lens or (micro adj lens)))                           | USPAT; US-PGPUB; IBM_TDB | 1/14/03 16:3 |
| 14 5680186.URPN. ("4790632"   "4904063"   "5052783"   "5101279"   "5161042"   7 "5165075"   "5680186").PN.                                                                                                                                                                                                                                                                                             | USPAT; US-PGPUB; IBM_TDB | 1/14/03 16:4 |
| 7 "5165075"   "5680186").PN. ("3622224"   "3680950"   "3697150"   "4470668"   "4534622"   "4626303"   "4709991"   "4790632"   "4793691"   "4836652"   "4884876"   "4963002"   "4985285"   "5029985"   "5052783"   "5054890"   "5056896"   "5064697"   "5078475"   "5089904"   "5101279"   "5150138" 23   "5151801").PN.                                                                                | USPAT                    | 1/14/03 16:4 |
| 2 ("Re26506"   "1263065").PN.                                                                                                                                                                                                                                                                                                                                                                          | USPAT                    | 1/14/03 16:4 |
| 155 (two near2 dimension\$2) near2 (lens near2 array) 2238 anod\$3 near2 bond\$3                                                                                                                                                                                                                                                                                                                       | USPAT; US-PGPUB; IBM_TDB | 1/14/03 16:4 |
| 281 (microlens or micro\$2lens or (micro adj lens)) near2 substrate (anod\$3 near2 bond\$3) and ((microlens or micro\$2lens or (micro adj 1 lens)) near2 substrate) (microlens or micro\$2lens or (micro adj lens)) same (anod\$3 near2 5 bond\$3)                                                                                                                                                     | USPAT; US-PGPUB; IBM_TDB | 1/15/03 15:5 |
| 5 ("4822167"   "5122663"   "5155412"   "5789748"   "6077417").PN.                                                                                                                                                                                                                                                                                                                                      | USPAT; US-PGPUB; IBM_TDB | 1/15/03 17:3 |
| 104 (anod\$3 near2 bond\$3) same optic\$3 31 polish near2 substrate same bond\$3                                                                                                                                                                                                                                                                                                                       | USPAT; US-PGPUB; IBM_TDB | 1/15/03 14:0 |
| ("4532003"   "4638552"   "4963505"   "5097314"   "5100814"   6 "5234535").PN.                                                                                                                                                                                                                                                                                                                          | USPAT; US-PGPUB; IBM_TDB | 1/15/03 15:4 |
| 70 4638552.URPN.                                                                                                                                                                                                                                                                                                                                                                                       | USPAT                    | 1/15/03 14:4 |
| 2 5200010.URPN.                                                                                                                                                                                                                                                                                                                                                                                        | USPAT; US-PGPUB; IBM_TDB | 1/15/03 15:5 |
| 4 ((5846638") or ("5200010") or ("5195150") or ("5790730")).PN.                                                                                                                                                                                                                                                                                                                                        | USPAT; US-PGPUB; IBM_TDB | 1/15/03 16:3 |
| 11 (microlens or micro\$2lens or (micro adj lens)) near2 sag 233 (reduce near3 stress) same trench                                                                                                                                                                                                                                                                                                     | USPAT; US-PGPUB; IBM_TDB | 1/16/03 11:4 |
| 45 ((reduce near3 stress) same trench) and lithography 4 ("4683637"   "4853348"   "4925805"   "5183775").PN.                                                                                                                                                                                                                                                                                           | USPAT; US-PGPUB; IBM_TDB | 1/16/03 11:4 |
| USPAT                                                                                                                                                                                                                                                                                                                                                                                                  | 1/16/03 11:5             |              |